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GEOGRAPHICAL RECORD

THE AMERICAN GEOGRAPHICAL SOCIETY

Annual Meeting of the Society. The annual meeting was held at the Engineering Societies' Hall, No. 29 W. 39th Street, on Tuesday evening, Jan. 26, 1915, at 8.30 o'clock, Vice-President Greenough in the Chair. The following persons recommended by the Council were elected Fellows:

Miss Nellie B. Allen,
Pierre Arnold Bernard,
Frederick J. Breeze,
Douglas Wilson Johnson.

Professor Edward Hull, LL.D., F.R.S., of London, was elected a Corresponding Member. Professor Hull has long been one of the best-known geologists of Great Britain. He was formerly Professor of Geology in the Royal College of Science, retiring in 1890. He is now 86 years of age and has long confined his professional activities to service as a consulting geologist. He has written many papers and monographs on geology and physical geography; and in 1883-84 he conducted a scientific expedition to Arabia Petræa and Palestine, sent out by the Palestine Exploration Fund. He wrote a memoir on that work.

Report of the Council

The Annual Report of the Council was presented and read. It appeared in the *Bulletin* for February (pp. 123-124).

Report of the Treasurer for 1914

The Report of the Treasurer, Mr. Henry Parish, Jr., was read:

General Account for 1914

The Treasurer respectfully reports:

On January 1st, 1914, there was on hand a balance of (of which $1,000 was capital awaiting investment).		$2,560.91
During the year there have been received for Fellowship Dues, Sales of Publications, Interest on Investments, Donations	$37,956.58	
Contributions for special purposes	18,011.83	55,968.41
Total		$58,529.32
There have been expended for Salaries, Meetings, Purchases of books and maps, Library, Publications, House Expenses, Insurance, Postage, &c	56,496.89	
Investment of legacy received in 1913	1,000.00	57,496.89
Leaving a balance on hand Dec. 31, 1914 ($375 of which is capital awaiting investment).		$1,032.43

The reports of the Council and the Treasurer were approved and ordered on file.

Report of the Special Committee

The Report of the Special Committee charged with the duty of selecting candidates for the offices to be filled was presented and read:

New York, January 21, 1915.

The Special Committee appointed December 14, 1914, to nominate and invite suitable persons to fill the vacancies in the offices of the Society, existing at the date of its Annual Meeting in January, 1915, respectfully report that they recommend the election of the following gentlemen to the offices designated:

		TERM EXPIRING IN
Vice-Presidents	JAMES B. FORD	1916
	ANTON A. RAVEN	1918
Foreign Corresponding Secretary	PROF. WILLIAM LIBBEY	1918
Treasurer	HENRY PARISH, JR.	1916
Councillors	BANYER CLARKSON	1918
	CHANDLER ROBBINS	
	EDWIN SWIFT BALCH	
	EDMUND L. BAYLIES	
	WALTER B. JAMES, M.D.	

[SIGNED] PAUL TUCKERMAN,
HAMILTON FISH KEAN,
LEVI HOLBROOK,
Committee.

The vote of the Society was unanimously in favor of the persons recommended by the Council and they were declared duly elected.

Vice-President Greenough then introduced the speaker of the evening, Will S. Monroe, A.B., Professor of Psychology in the New Jersey State Normal School, who addressed the Society on ''Bohemia.'' His very interesting and instructive lecture was illustrated by a large number of stereopticon views.

An extra inter-monthly meeting of the Society was held at the Engineering Societies' Hall on Tuesday evening, Feb. 9, 1915. Edgar James Banks, A.M., Ph.D., recently American Consul at Bagdad and Professor of History in Robert College, Constantinople, addressed the Society upon ''Armenia,'' with lantern views.

☞ **The Society's Exhibitions.** The number of visitors to the Exhibition Hall in January was 2,774. The collection of war maps, on which the explanatory symbols are changed daily to conform with the news from the front, continues to be a center of much interest.

On February 10 over 300 large photographs illustrating the scenery and the development of Alaska were placed on racks in the hall. The larger part of the collection and many maps of the territory, specially prepared by the Seattle Chamber of Commerce, have been loaned by that body for the exhibition. The admirable results of the work of the Agricultural Experiment Stations are finely illustrated by photographs loaned by the Department of Agriculture, Washington. Ex-Governor Brady and some of the railroad enterprises in Alaska have contributed notable series of views. The collection will be on exhibition for two months.

The large collection illustrating the progress of the Philippines under the American régime, which attracted many visitors to our hall for over two months, is now being shown to the people of Brooklyn by the Brooklyn Institute of Arts and Sciences.

NORTH AMERICA

The Kuskokwim River to be opened to Commerce. Secretary of Commerce Redfield announced on January 25 that a practical, navigable channel from Bering Sea into the mouth of the Kuskokwim River had been discovered by Captain Lukens of the Coast and Geodetic Survey. The Kuskokwim is the second largest river in Alaska. It is nine miles wide at its mouth and navigable for over 600 miles. The submerged flats of the delta extend 100 miles out to sea. It was through this uncharted delta that the survey steamer *Yukon* made the discovery of the channel which means much to the commerce of that section of Alaska. In making the survey Captain Lukens reports that he took 14,256 soundings, covering an area of over 100 square miles. When the Coast and Geodetic Survey chart showing the newly discovered channel is issued it will be possible for steamship companies to send vessels to the Kuskokwim and thus initiate the development of the mining, fishing and agricultural resources of that region.

It has been known for some time that there are large areas of mineral lands along the Kuskokwim, with promising prospects of mercury-bearing cinnabar, gold-bearing quartz, placer grounds and coal lands whose development only awaited reliable means of transportation.

Contiguous to the Kuskokwim Valley are thousands of square miles suitable for reindeer grazing. Captain Lukens reports that the small government herd has grown until there are now about 6,000 reindeer. The cost of raising reindeer is very small. Three men can take care of 1,000. The animals subsist on the country the year round. Even in winter, when the ground is covered with snow, no extra feed is required for them. The meat of the reindeer is excellent food. Even with the small market afforded at present, the native herd owners are becoming prosperous, and now that better transportation is promised there is every reason to believe that this country will furnish many thousands of pounds of this meat for shipment to the United States. The Kuskokwim also has a large salmon run. Captain Lukens says that, as reliable transportation is now at hand, the canning companies are arranging to extend their operations into this region.

Secretary Redfield says that plans are being made in Seattle for the construction, by different companies, of two light draft vessels designed especially to take care of the expected development of commerce on the Kuskokwim River; and that still another shipping firm has announced sailings to the Kuskokwim at the opening of navigation next spring.

Dangers to Navigation in Alaska. Twenty-one dangerous rocks in forty-two miles of ship channel have been discovered in Alaska during the past season by field engineer John A. Daniels of the Coast and Geodetic Survey. These rocks were located by means of a wire drag more than a mile long, the wire being supported at the desired depths by cables and towed along by power boats. The ship channels covered by the wire-drag survey are in southeastern Alaska. They form a section of the well-known inside passage followed by all steamers going up and down the coast. The main thoroughfares included in the survey were Revillagigedo Channel, Nichols Passage, and Tongass Narrows.

One of these rocks is of pyramidal shape and rises over 600 feet from the bottom of the channel to within seventeen feet of the surface. The area covered by the wire drag was 60 square miles. The cost for each danger discovered was $675. These dangerous rocks have been marked on new editions of the Coast and Geodetic Survey charts and the more important ones will be buoyed by the lighthouse service. (*From the Dept. of Commerce, Washington.*)

Report of the Director of the U. S. Geological Survey. The thirty-fifth annual report (July 1, 1913–June 30, 1914) of Director George Otis Smith of the U. S. Geological Survey has just been issued. He reports that, during the fiscal year, the areas covered by geological surveys in the United States excluding Alaska were, in square miles: Detailed areal, 11,883; detailed reconnaissance, 9,335; reconnaissance, 47,840.

In Alaska, fourteen parties were in the field in 1913. The average length of the Alaskan field season is 110 days. Areas covered by geologic exploratory surveys (1:500,000) amounted to 3,500 square miles; by geologic reconnaissance surveys (1:250,000), 2,950 square miles; by detailed geologic surveys (1:62,500), 180 square miles. Much of the time of the geologists was devoted to special field problems. Topographic exploratory surveys (1:500,000) covered about 3,400 square miles; topographic reconnaissance surveys, 2,535 square miles; detailed topographic surveys, 287 square miles. In 1914 Mr. Alfred H. Brooks continued investigations of placer deposits in different parts of Alaska; and among other features of the work were further investigations of Alaska tin deposits, the auriferous lodes of the Seward Peninsula, the copper deposits adjacent to the Kuskulana R., etc.

The total area surveyed to date in the United States proper is 1,197,782 square miles, or 39.6 per cent. of the entire country. Topographic surveys were also carried on in Hawaii, the area mapped during the fiscal year being 342 square miles.

The land-classification work of the Survey included reports on 45,000,000 acres, or 70,000 square miles of public lands, an area of coal, phosphate, oil, and dry-farming lands greater than the area of all the New England States. In the collection of statistics of mineral production the Geological Survey cooperates with the state geologists of sixteen States and carries on correspondence with 90,000 producers.

Recent Work of the Coast and Geodetic Survey. The progress of the hydrographic work is reviewed in the report of the Survey for the year ending June 30, 1914. Most of the United States coast work was on the Atlantic side. Along the Pacific, revisions of surveys were begun on the Washington coast. In Alaska the approaches to the Kuskokwim River, the channels of Icy Strait and Uminak Pass, the coasts of the Shumagin Islands, as well as the west shore of Cook Inlet, were surveyed. General surveys were also prosecuted on the west coast of Prince of Wales Island.

The coast survey of the Philippine Islands was carried on under the direction of headquarters at Manila. The work consisted mainly of general surveys on the east coast of Mindanao, the approaches to Manila Bay, Samar Sea, the Calamianes Islands, northern Palawan, the east coast of Palawan and Sulu Sea and vicinity.

The geodetic, magnetic and tidal work comprised measurement of primary base lines in Colorado, Wyoming and Tennessee. Reconnaissance for triangulation was made in Washington, Oregon, California, Colorado, Utah, Wyoming, Montana, Arkansas and Oklahoma. Primary triangulation was extended in Tennessee, Arkansas and Mississippi. Astronomical latitude determinations were made in South Dakota, North Dakota, Colorado, Wyoming, Montana and on the Texas-California arc of primary triangulation. Precise levelling was done in Washington, Montana, North Dakota and Minnesota. Parties were engaged in revising and supplementing the triangulation on the coasts of Maine, Massachusetts, Rhode Island, the District of Columbia, North Carolina, South Carolina, Washington, Oregon, California, Porto Rico and the Hawaiian Islands, and in determining the geographical positions of aids to navigation along the Atlantic and Pacific coasts and in Porto Rico.

Progress is also reported on international boundaries. On the United States-Canada border the survey and demarcation of sections of the east-west line were continued. A joint American and Canadian party was furthermore engaged along the Alaskan boundary.

Large Phosphate Finds in Montana. In 1911 rock phosphate was discovered by J. T. Pardee, of the U. S. Geological Survey, at three localities in western Montana—in the Garnet Range, six miles north of Garrison; at Philipsburg; and half a mile east of Elliston. A detailed examination of the phosphate field at Elliston was begun in 1913 by R. W. Stone and C. A. Bonine, and their report has just been published by the Geological Survey as *Bulletin 580-N*. The phosphate in the south half of the Elliston field is within two miles of the Northern Pacific Railway and readily accessible to it. From the studies of the Survey it is estimated that the southern part of the Elliston field contains at least 15,204,861 tons of phosphate rock, while in the northern half there is an estimated deposit of 70,000,000 tons of rock, making a total of more than 85,000,000 tons in the whole field. These deposits have not yet been developed, owing to the recency of their discovery. (*Press Bulletin of the U. S. Geological Survey.*)

The Colorado Geographic Board. On October 28 last, at the call of the Governor of Colorado, a convention of about one hundred citizens met in Denver to consider methods of supervising and clarifying the geographical names of the state, of collecting and preserving the historical associations of towns, streams, mountains, highways, passes and other geographical features and of eliminating duplicate or otherwise undesirable names. The convention organized the Colorado Geographic Society. The government of the Society is vested in an advisory committee now forming, which will consist of twenty citizens, who will select, with the Governor's approval, five persons to be known as the Colorado Geographic Board. The Board will be the working arm of the society, but all its findings will be referred to the advisory committee for final decision. No general revision of names is contemplated at present, but the Board will work upon such problems as are presented to it. For example, the U. S. Geological Survey has in preparation several maps of the Longs Peak region and parts of the San Luis Valley concerning which problems as to the choice between contradictory names or appropriate names for hitherto unnamed points have arisen. These questions would ordinarily be settled at Washington, but it is now planned to submit them to the Board. The Board's activities, for a long time to come, will be confined to meeting specific questions of this sort and to gathering historical and other material.

Another Change in Weather Bureau Publications. A welcome simplification and consolidation of the publications of the Weather Bureau has already been noted in the *Bulletin* (Vol. 46, 1914, p. 836) in connection with the change in the character of the *Monthly Weather Review,* beginning with January, 1914, and the discontinuance of the *Bulletin of the Mount Weather Observatory.* It is a satisfaction to note another change, which is no less welcome, toward a further consolidation of the Weather Bureau publications. Anyone who tries to keep abreast of meteorological literature must feel relieved when the number of separate publications can be reduced without diminishing the scientific output. The latest change is the discontinuance of the series of quarto *Bulletins* (A to Z) and of the octavo *Bulletins* (1 to 44), and the substitution therefor of a series of Supplements to the *Monthly Weather Review.* These Supplements are to include such contributions to meteorology as would formerly have been published as *Bulletins,* and are to appear at irregular intervals, as occasion demands. Thus, greater simplicity and greater uniformity are secured, and there is no loss anywhere.

The first of the new series of Supplements* is a brief, clean-cut discussion of the storm types of the United States and their movements. Our storms are grouped in the usual way, according to their places of origin (as seen on the weather map) and their characteristic movements, and the weather types associated with them are summarized. The normal 24-hour movements are set forth in great detail in a series of over 100 charts. There is also a useful chart showing the regions of origin of our storms and their average January tracks. A series of brief notes on weather forecasting will be found useful by those who are studying that aspect of meteorology. The report is one which well deserves to be bound and kept readily accessible. in any meteorological laboratory or classroom for constant reference. R. DEC. WARD.

Agricultural Atlases of the United States. A school atlas of the agriculture of the United States is being prepared by the Office of Farm Management, Bureau of Plant Industry, in coöperation with other bureaus of the U. S. Department of Agriculture. This atlas will contain about 100 pages of maps and diagrams accompanied by a brief text. Most of the maps in groups 1, 2 and 3 will appear on the scale of about 1:8,000,000 and those in group 4 in about 1:13,000,000. The principal contents will include the following maps:

1. Relief.
2. Soils.
3. Climate: frost and the frostless season; mean temperatures, December to February and June to August; mean annual maxima and minima; sunshine; mean annual precipitation; annual frequency of utilizable rains (0.1 to 1.0 in. in a day); drought frequency; average precipitation, April to September and June to August; mean annual snowfall; prevailing wind direction, summer and winter.
4. Crop maps showing distribution by acreage and production of the prin-

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* Types of Storms of the United States and their average Movements. By Edward H. Bowie and R. Hansen Weightman, U. S. Department of Agriculture, Weather Bureau. *Monthly Weather Review*, Supplement No. 1. 4to. Washington, 1914. Pp. 37. 114 Charts.

cipal crops; seed-time and harvest maps; maps showing date of bloom of certain varieties of apples.

5. Live stock distribution.
6. Farms, size, value and tenure.
7. Rural population.

The atlas will probably be published this year. It will be the forerunner of a more extensive atlas of American agriculture now under preparation. The proposed parts of this atlas are as follows:

I. Elevation and Geology; II. Soils; III. Climate; IV. Native Vegetation; V. Crops; VI. Live Stock; VII. Farms and Farm Property; VIII. Rural Population; IX. Rural Organizations.

In this larger atlas each phase will be treated in considerable detail. It is proposed to issue separate monographs, as soon as finished, dealing with each major crop and subject. It is expected that these separates will be assembled later for final publication. CHARLES F. BROOKS.

Educational Activities. The great fire at Wellesley College last year did not impair the vigorous work in geography which is carried on in that institution. Two hundred and seventy students were engaged in the study in the first term of the school year 1914-15. Miss Ellen Churchill Semple gave courses in anthropogeography and the historical geography of the Mediterranean Basin. The geography courses this year embrace physiography, economic and industrial geography, geography of North America and geography of Europe. Professor W. W. Atwood of Harvard University is lecturing on the geography of North America during the second semester. Professor Elizabeth F. Fisher, head of the Department of Geography and Geology, with Mr. Haynes, Mr. Lahee, Miss Goss, Miss Bullard and others, is carrying on the class-room and laboratory work.

The Southern Geographic Society, in cooperation with the University of Tennessee, is planning a course of university extension work. A feature of this work will be the accumulation of lantern slides and motion-picture films covering all phases of industrial and vocational education, which will be available for schools and organizations at the cost of transportation.

At a geographical round-table in Duluth, on Feb. 12, conducted by Mr. Eugene Van Cleef, in charge of geography at the Duluth State Normal School, these questions evolved a live discussion: 1. What is the purpose in teaching geography in the grades? 2. After a course in geography, what knowledge should the student have acquired? Mr. Van Cleef also gave a short talk on the "Geography of the European War."

Canadian Fish for England. The closing of the North Sea owing to war conditions led to a demand in Great Britain for fresh fish caught in Canadian waters. Three Canadian express refrigerator cars carrying 60,000 pounds of halibut taken in the Pacific off Prince Rupert, B. C., were sent to the Atlantic, shipped from St. John, N. B., and reached England in first-class condition. It is only since the recent completion of the Grand Trunk Pacific line that Prince Rupert fish has been on sale in eastern Canada and the United States. Remarkable catches are now being made in the North Pacific fishing grounds for the British market.

Utilization of Poor Soils. A report printed by the Canadian Government* relates to a part of the region through which the Georgian Bay Canal will pass, a short cut linking the waters of Lake Huron and Lake Ontario. Most of this Trent Watershed has a sandy or gravelly soil and the farming population is decreasing. The report seems to be pervaded with the idea that there is a fundamental distinction between agricultural and non-agricultural land; or, in other words, that we have much land that can never be profitably cultivated and should therefore be kept permanently in forest. Is it not a fact, however, that, as population increases, poorer and poorer land is converted to agricultural uses, while at the same time the increase of markets and transportation, the discovery of better methods of farming and of crops better adapted to poor soil, etc., tend to make farming on the poorer soils as profitable as it was on the rich soils when they were first utilized?

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*Trent Watershed Survey. A reconnaissance by C. D. Howe and J. H. White. With an introductory discussion by B. E. Fernow. 156 pp. Maps, ills., index. Commission of Conservation, Committee on Forests, Toronto, 1913.

Illustrations of this tendency may be seen throughout the long-leaf pine region of the southeastern United States. Its soil is rather poor and sandy, and before the days of commercial fertilizers the land was regarded as fit only for grazing and timber. As late as 1880 West Florida had less than five inhabitants to the square mile, outside of Pensacola. But now that the sandy, easily tilled soil is known to respond readily to artificial fertilization, farmers are moving upon it in ever-increasing numbers, following the lumbermen so closely that there is no decrease of population when the best timber is removed. West Florida, outside of Pensacola, now has about fourteen inhabitants to the square mile, and some of the counties in the corresponding parts of Georgia and Alabama more than doubled in population between 1890 and 1900, or 1900 and 1910. In the West, dry farming and irrigation are likewise opening up new agricultural empires. ROLAND M. HARPER.

CENTRAL AMERICA AND WEST INDIES

The Scientific Survey of Porto Rico. Professor N. L. Britton, Chairman of the Committee of the New York Academy of Sciences which has in charge the scientific survey of Porto Rico, begun last year (*Bulletin,* 1914, No. 8, pp. 606-607), has submitted to Dr. Arthur Yager, Governor of Porto Rico, a report on the progress of the survey from July 1 to December 31, 1914.

The geological work was undertaken by Dr. Charles P. Berkey of Columbia University, New York, assisted by Dr. Clarence N. Fenner of the Geophysical Laboratory, Washington. A month was spent in Porto Rico in August–September. Drs. Berkey and Fenner covered more than 1,250 miles on the roads, in addition to considerable distances traveled on foot in numerous short side trips.

The object was primarily to lay a foundation for detailed studies that are to follow. Special attention was given to the most fundamental geological matters, such as: (a) determination of the kinds of rocks, (b) the geologic ages represented by them, (c) the structural relations between successive formations, (d) the grouping of the large number of small rock formations into fewer series capable of being represented on geologic maps, (e) relation of the geologic structure to the larger surface features of the island, (f) kinds of ore deposits or minerals of economic value to be recommended for special study, (g) an attempt to make a preliminary statement of the main facts underlying the geologic history of Porto Rico.

This investigation has been of the nature of a rapid reconnaissance, but it was done with enough detail to permit statements to be made of a guiding nature in all of these different lines. Many photographs were taken to illustrate the topographic and structural features, and a large number of rock and fossil specimens were gathered for laboratory study. They are judged to represent the most characteristic materials forming the geologic basis of the island.

A summary of the observations indicates that the geologic structure of the island is extremely complex and that the greater part of the formation units are igneous, and for the most part of volcanic origin. A smaller number are more simple sediments and limestones of reef type. There is very great variety in the petrographic habit of the rocks, and the individual representatives are so numerous that it would be practically impossible to map or represent them without grouping into larger field units representing each a special historical phase of development. The characteristics of these larger divisions have been determined and can be applied to the detailed work later to be done. Although the larger part of the material is volcanic, this kind of action seems to be almost wholly lacking in the later stages of the island development. The igneous history is all pre-Tertiary. Beginning with Eocene time, the island had been worn down by erosion to a peneplain and was later submerged, while on it was developed the Tertiary shales and heavy limestone beds. A large part of the present land may have been covered by these limestones at that time. Subsequently the whole island was elevated many hundred feet above the sea, and, in still more recent time, has been heavily attacked by solution and erosion, leaving only remnants of the original limestone formation to represent this stage of history.

All of the topographic features and all of the soil diversity of the island are directly related to these underlying fundamental differences of geologic structure and composition. A preliminary report is now being prepared to cover these investigations.

The work in zoölogy by Dr. Frank E. Lutz, Mr. Roy W. Miner, Mr. John T. Nichols and Messrs. Frank E. Watson, H. G. Barber, Dr. Crampton and others is similarly summarized.

The botanical investigation has included critical studies of the collections made for the New York Botanical Garden in former years and the preparation of descriptions for publication in the final reports. The exploration of the islands Mona and Desecheo in the Mona Passage, in the early part of the year, yielded valuable information regarding the distribution of Porto Rican plants and several species new to science. Dr. J. A. Schafer spent about six weeks in July and August in the Sierra de Naguabo and obtained a valuable collection, which adds a number of known species to the Porto Rican flora.

The botanical exploration has shown some unexpected results; for example, the collection and investigation of the grasses of Porto Rico have already added forty-four species to the known grass flora of the island, increasing the list of Porto Rico grasses about thirty per cent.

New Chart of the Panama Canal. A new chart of the Panama Canal and its approaches has been published by the Hydrographic Office. It is in two sheets, No. 5000 being the northern or Atlantic portion and 5001 the southern or Pacific portion. The price of each sheet is 30 cents.

Pilot Chart of the Central American Waters. A new pilot chart is now issued monthly by the Hydrographic Office for the region between the parallels of 1° and 31° N. and the meridians 52° and 100° W. It thus embraces all of the West Indies, Gulf of Mexico, and Caribbean Sea and extends on the Pacific Ocean from Acapulco to Esmeraldas, Ecuador. As its scale is much larger than that of the older pilot charts, being seven-tenths of an inch to a degree of longitude, its hydrographic features are correspondingly more ample. The variation lines are for the epoch 1915. The meteorological features, as in the case of the existing pilot charts, are furnished by the U. S. Weather Bureau. The first issue was for January, 1915.

Cuban Rainfall and English Rainfall. At the May meeting of the Royal Meteorological Society (London), Mr. A. Hampton Brown, in a paper entitled "A Cuban Rain Record and Its Application," referred to another new correlation between the rainfalls at places far apart from one another. The data used are the rainfall records of the Belen College Observatory, Havana. The period covered is 1859-1912. The average rainfall for the fifty years 1861-1910 is just under fifty inches, but during the past fifteen years there has been a tendency to diminished amounts. The rainfall year may be divided into two seasons: a wet, from May to October, and a dry, from November to April. The writer has endeavored to trace the connection between the wet season at Havana, during May to October, and the precipitation in southwest England and South Wales during the three months January to March following. He has found that from 1878 onward an excess of rainfall in Havana during May to October was generally followed by a deficient rainfall in southwest England at the beginning of the next year, and *vice versa.* For the eight years 1888-1895, when the rainfall at Havana was continuously in excess, in southwest England the figures, with one exception, were the reverse. During the next five years, 1896-1900, there was a deficiency at the Cuban station, and, excepting 1897, an excess in England. There were years in which the correlation was not apparent, but the general continuance of the see-saw movement has been so persistent that it cannot be regarded as merely coincidental. R. DeC. Ward.

ASIA

Indian Monsoon Rainfall. The summer monsoon rains control all conditions of life in India to such an extent that from almost the earliest days of English settlement there attention has been directed to the forecasting of the character of these rains. The study of the controls of the monsoon rainfall has led the Indian meteorologists and others to many very interesting, and some rather surprising, conclusions. The latest investigation, by Dr. Gilbert T. Walker, Director-General of Indian Observatories, is entitled "A Further Study of Relationships with Indian Monsoon Rainfall" (*Mem. Indian Met. Dept.*, Vol. XXI, Part VIII, 1914). It appears that attempts to forecast the general character of the monsoon five months or more before its arrival on the basis of the previous pressures are unsuccessful. The heating of the plains of India, and the resulting lowered pressure, are a very essential part of the mechanism which results in bringing the moist air from the South Indian Ocean across the equator to India. It would seem, therefore, that years of high temperature over India (in May) would be years of good rainfall, and *vice versa.* An examination of the question has not shown this to be the case, at least so far as temperatures measured in the usual way are concerned. It does, however, seem possible that the temperatures in the upper air may be higher in years of abundant monsoon rainfalls, although observations are thus far lacking. A relation of the icebergs in the southern ocean to the Indian monsoon rainfall has been suggested, but Dr. Walker fails to find "a material influence" of this sort. R. DeC. Ward.

EUROPE

Geography and the War. The *Geographische Zeitschrift,* beginning with the November, 1914, number (Vol. 20, No. 11), is to devote the greater part of its leading articles to the war. Geographical aspects of the military campaigns, the political problems and the economic effects of the war will be discussed. The first number contains an introductory article by Professor A. Hettner, the editor, entitled "Our Task in the War"; a paper by Professor J. Partsch of Leipzig on the geography of the Polish campaign (to be continued); and a geographical estimate by A. Dix of Berlin of the conflicting interests and aims of the belligerents and the economic effects of the war.

The *Deutsche Kolonialzeitung* (No. 33, Dec., 1914) says that it will again appear monthly in 1915. The December number is devoted to an account of the effects of the war upon the German colonies.

Prof. Dr. Alfred Grund, Professor of Geography at the University of Prague, has been killed in battle in Servia. He was born in Prague. He served as assistant director of the Institute of Oceanography at Berlin in 1910, whence he was called to a professorship in Prague University.

Count Julius von Zech, formerly Governor of Togo, Africa, who went to the front as a Major in the German army, has been killed. For fifteen years he was an active factor in the progress of the Togo Colony.

Major John Beaufort Corry, 3rd Sappers and Miners, Indian Army, was killed by a howitzer shell on Nov. 4 while in charge of a party digging trenches in Flanders. He was forty years old, a member of the Alpine Club, a mountaineer of reputation, and owing to his capacity for finding his way among mountains he was selected as leader of the Kashmir Expedition. He was killed four days after landing at Marseilles from India.

GENERAL

An English Translation of Brunhes' "La Géographie Humaine." Professor Bowman of Yale and Professor Dodge of Teachers College, Columbia University, have been engaged, during the past half-year, in the adaptation of Brunhes' "La Géographie Humaine" for English and American use. The volume will be completed by mid-summer, and will be published by Rand, McNally & Co.

PERSONAL

Dr. Arnaldo Faustini of the Popular University of Rome, known as a writer on Polar topics, is at present in our country. He has delivered a number of lectures in New York on Polar explorations and geography and on volcanoes and earthquakes in Italy.

Mr. Charles Hallock, the well-known author and naturalist, founder of the periodical *Forest and Stream,* and of the International Association for the Protection of Game, and occasional contributor to our *Bulletin,* is now, in his advancing years, living at the John Dickson Home in Washington. Mr. Hallock is full of reminiscences of the years he spent in nature study and of the many friends who were especially interested in or shared his labors.

Professor Lawrence Martin of the University of Wisconsin gave an illustrated lecture entitled ''Alaskan Mountains and Glaciers in Relation to Railway Routes'' before the Appalachian Mountain Club on Jan. 27 in Huntington Hall, Boston. He repeated the lecture before the New York Academy of Sciences on Feb. 1, and also spoke at the geological conference at Harvard on Jan. 26 on ''Muir Glacier in 1911 and 1913.''

Captain Ejnar Mikkelsen, whose latest work in the Arctic resulted in the recovery of important records of Mylius Erichsen in East Greenland, was in New York City for a few days early in February on his way to the Danish West Indies.

Dr. Eug. Oberhummer, Professor of Geography in the University of Vienna, who had expected to lecture at Columbia University during the second half of 1915, in spite of the war, has been forced to abandon his plans.

Professor R. D. Salisbury of Chicago lectured on ''In and About Patagonia'' before the Southern Geographic Society at Knoxville, Tenn., on Jan. 13. The Society has arranged for seven other lectures during the season ending in May.

OBITUARY

Vincenz Haardt von Hartenthum. This well-known cartographer of Austria is dead at the age of 71 years. He was long at the head of the cartographical establishment of E. Hölzel, Vienna, which produced many of his best-known works, including his wall map of the Alps, ethnographical map of Asia, maps of the North and South Polar areas, the Balkan Peninsula, educational maps, etc. Later, in the service of the k. k. Militärgeographisches Institut, he produced a series of maps of European countries and other valuable works.

Vice-Admiral Sir George Nares. Vice-Admiral Nares died in London on January 15 at the age of 84. He entered the British navy in 1845, but won his highest distinction in the field of exploration. From 1851 to 1854 he served on the *Resolute* under Sir E. Belcher in the search for the Sir John Franklin expedition and took part in the sledge journeys in quest of traces of Franklin. During these journeys the sledge parties were able to cover large tracts and to delineate the coast line of numerous islands and straits. In 1872-1874, he commanded the ship *Challenger* on the famous Challenger Expedition, whose remarkable results in the fields of oceanography, meteorology and other branches of science fill fifty large volumes. In 1875-1876, he commanded the British Arctic expedition in the *Alert* and *Discovery* which passed through the Smith Sound channels to the Arctic Ocean north of Grant Land, made large additions to our knowledge of the American Arctic, but failed in its primary object to reach, if possible, the North Pole. In 1878, he again commanded the *Alert* in carrying on survey work in Magellan Strait. For the last twenty years of his active life he was Marine Adviser to the Board of Trade, London. He was an Honorary Member of the American Geographical Society.